

PROGRAM OPTIMIZATION METHOD AND COMPILER USING THE PROGRAM OPTIMIZATION METHOD

ABSTRACT

A compiler 10 comprises: an impact analysis unit 12 for performing an analysis to determine how much the execution speed of a program to be compiled can be increased by fixing, in a specific state, a parameter of a predetermined command in the program; a data specialization selector 13 for, when the program is executed, obtaining statistical data for the appearance frequency of each state, obtained by the impact analysis unit 12, and for determining the state where the parameter of the predetermined command is to be set; and a specialization and compiling unit 14 for, based on the results obtained by the impact analysis unit 12 and the data specialization selector 13, generating, in the program, a specialized path along which the parameter of the predetermined command is fixed in the specific state.